71012 65,0

503 / 359-5956



KLEIN CONSULTING ENGINEERS, INC.

Civil Engineers/Planners/Surveyors

P. O. BOX 608

Perest Greve, OB 97114 1928 Council Street

September 20, 1990

Smith & Monroe & Gray Engineers, Inc. Park Plaza West, Suite 210 10700 S.W. Beaverton Hwy. Beaverton, Oregon 97005

Attn: Steve Rinella

Re: Rittenhouse-Zeman & Associates Dewatering Test Data

Dear Steve:

The RZA dewatering tests performed at Ash Grove Seattle indicate that the soils and aquifer properties in the vicinity of the test wells would lend themselves adequately to implementation of a percolation facility. The predominately sandy nature of the soil exhibits good hydraulic conductivity, and the strong tidal influence on groundwater levels also shows the established subsurface hydraulic link between the Duwamish Waterway and groundwater levels in the area of the test holes. This information is similar to that made available in previous geotechnical reports by RZA which formed the basis for our original analysis.

However, recent discussion with Nate Fernow revealed that the area in the existing pond vicinity was filled in the past with dredging spoils and other materials exhibiting very low permeability. This particular fill area was apparently limited to the southwestern corner of the existing Ash Grove property.

The test wells monitored by RZA are located over 800 feet from the existing pond. Additionally, the permeability values determined for the sandy soils of the test area do not agree with the relatively slow percolation characteristics exhibited by the existing pond. The low hydraulic conductivity of the soil around the pond is further emphasized by negligible tidal influence observed to date. These factors lead us to believe that the dewatering information obtained by R2A would not apply in the pond vicinity.

However, if the area of the Ash Grove site were available for construction of percolation facilities, and the characteristics location matched those evaluated recently by

Smith & Monroe & Gray Engineers, Inc. Page 2

RZA, a drywell scheme would appear to be more feasible than that demonstrated in the present pond area.

Please contact our office if you have any questions regarding this subject.

Sincerely,

KLEIN CONSULTING ENGINEERS, INC.

Dan Keppen

DK:rw